A part of **Agilent**

10052 - Column Application Note Characterization of Poly(acrylic acid)

Poly(acrylic acids) are obtained from radicalic polymerisation of acrylic acid. They are soluble in water. Crosslinking with polyvalent ions like Al leads to strong water swellable products, which are used as water adsorbers. Polyacrylic acids are often used as dispersion or flotation additive, also as glue additive.

Experimental Setup

Mobile Phase:	Water Disodium hydrogen phosphate 0.07M
Stationary Phase:	PSS SUPREMA
Flow rate [mL/min]:	1,00
Temperature [°C]:	25
Detection:	Shodex-RI71
Calibration:	Kit Poly(acrylic acid) sodium salt
Data processing:	PSS WinGPC

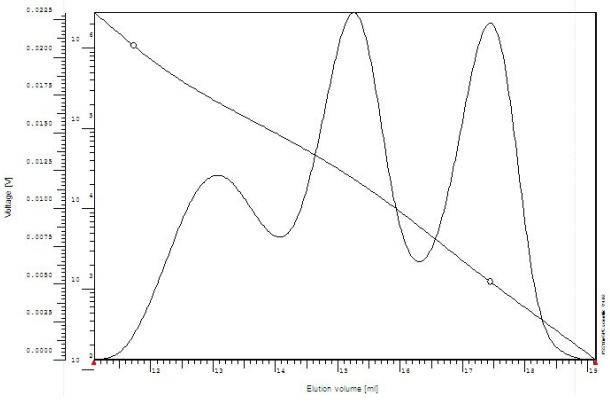
Recommandations for Sample Concentration

narrow PDI	
M 100 Da - 10 000 Da:	2 g/L
M 10 000 Da - 1 000 000 Da:	1-2 g/L
M > 1 000 000 Da:	0.5 g/L or less
broad PDI (>1.5)	
all molar masses:	3.0 - 5.0 g/L
Injection volume [µL]:	100

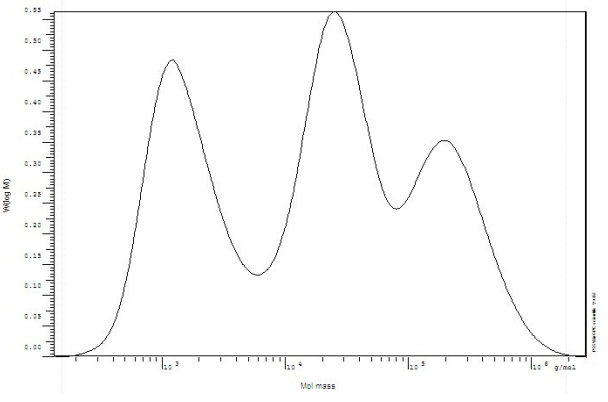
Suitable Columns

low molecular weights:	P/N 206-0001 (set of 3) OR sua083005lis (1 linear)
medium molecular weights:	P/N 206-0002 (set of 3) OR sua083005lim (1 linear)
high molecular weights:	P/N 206-0003 (set of 3) OR sua083010lxl (1 linear)
ultrahigh molecular weights:	P/N 206-0004 (set of 3) OR sua083010luh (1 linear)

Elugram and Calibration
separation on PSS SUPREMA



Molar Mass Distribution
separation on PSS SUPREMA



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